

Claim Amendments:

1. (currently amended) An improved method of fabricating a micro-mechanical device, the method comprising:

depositing at least one sacrificial layer on a substrate;

curing the sacrificial layer;

fabricating a micro-mechanical device on the sacrificial layer; and

removing the sacrificial layer by immersing the substrate in a cleansing solution comprising super-critical carbon dioxide and a solvent suitable to remove the sacrificial layer.

2. (currently amended) A method according to claim 1, wherein the solvent is selected from the group consisting of methanol, ethanol, ethyl acetate, methyl acetate, acetone, methylethylketone, [[or]] and methyl tertiary-butyl ether.

3. (original) A method according to claim 1, wherein the sacrificial layer comprises a photoresist solution.

4. (original) A method according to claim 3, wherein the photoresist solution comprises a mixture of novolac resin and a photoresist solvent.

5. (original) A method according to claim 1, wherein the step of curing the sacrificial layer comprises a hard bake.

6. (original) A method according to claim 1, wherein the step of curing the sacrificial layer comprises a soft bake.
7. (original) A method according to claim 1, wherein the step of curing the sacrificial layer comprises UV hardening.
8. (original) A method according to claim 1, wherein the step of removing the sacrificial layer further comprises agitating the cleansing solution with an impeller.
9. (original) A method according to claim 1, wherein the cleansing solution further comprises a non-ionic surfactant solution.
10. (original) A method according to claim 9, wherein the non-ionic surfactant solution comprises a polystyrene-b-poly(1,1-dihydroperfluorooctyl acrylate) copolymer.
11. (currently amended) An improved method of fabricating a micro-mechanical device, the method comprising:
 - depositing at least one sacrificial layer on a substrate;
 - curing the sacrificial layer;
 - fabricating a micro-mechanical device on the first sacrificial layer;
 - removing the first sacrificial layer;
 - recoating the micro-mechanical device with a recoat layer of sufficient thickness to completely encapsulate the micro-mechanical device;

curing the recoat layer; and
removing the recoat layer by immersing the substrate in a cleansing solution
comprising super-critical carbon dioxide and a solvent suitable to remove the sacrificial
layer.

12. (currently amended) A method according to claim 11, wherein the solvent is selected
from the group consisting of methanol, ethanol, ethyl acetate, methyl acetate, acetone,
methylethylketone, [[or]] and methyl tertiary-butyl ether.

13. (original) A method according to claim 11, wherein the recoat layer comprises a
mixture of novolac resin and a photoresist solvent.

14. (original) A method according to claim 13, wherein the recoat layer does not contain
a photoactive compound.

15. (original) A method according to claim 11, wherein the step of curing the recoat
layer comprises a hard bake.

16. (original) A method according to claim 11, wherein the step of curing the recoat
layer comprises a soft bake.

17. (original) A method according to claim 11, wherein the step of curing the recoat
layer comprises UV hardening.

18. (original) A method according to claim 11, wherein the step of removing the recoat layer further comprises agitating the cleansing solution with an impeller.

19. (original) A method according to claim 11, wherein the cleansing solution further comprises a non-ionic surfactant solution.

20. (original) A method according to claim 19, wherein the non-ionic surfactant solution comprises a polystyrene-b-poly(1,1-dihydroperfluorooctyl acrylate) copolymer.

21. (currently amended) An improved method of fabricating a micro-mechanical device, the method comprising:

depositing a first sacrificial layer on a substrate;

removing portions of the first sacrificial layer to define a first set of vias;

depositing a first metal layer on the first sacrificial layer;

removing portions of the first metal layer to define a set of first via supports;

depositing a second sacrificial layer on the first metal layer;

removing portions of the second sacrificial layer to define a second set of vias;

depositing a second metal layer on the second sacrificial layer;

removing portions of the second metal layer to define a set of second vias; and

removing the first and second sacrificial layers by immersing the substrate in a cleansing solution comprising super-critical carbon dioxide and a solvent suitable to remove the sacrificial layers.

22. (currently amended) A method according to claim 21, wherein the solvent is selected from the group consisting of methanol, ethanol, ethyl acetate, methyl acetate, acetone, methylethylketone, [[or]] and methyl tertiary-butyl ether.

23. (original) A method according to claim 21, wherein the first and second sacrificial layers comprise a photoresist solution.

24. (original) A method according to claim 23, wherein the photoresist solution comprises a mixture of novolac resin and a photoresist solvent.

25. (original) A method according to claim 21, wherein the step of removing the sacrificial layers further comprises agitating the cleansing solution with an impeller.

26. (original) A method according to claim 21, wherein the cleansing solution further comprises a non-ionic surfactant solution.

27. (original) A method according to claim 26, wherein the non-ionic surfactant solution comprises a polystyrene-b-poly(1,1-dihydroperfluorooctyl acrylate) copolymer.

28. (currently amended) An improved method of fabricating a micro-mechanical device, the method comprising:

depositing a first sacrificial layer on a substrate;

removing portions of the first sacrificial layer to define a first set of vias;

depositing a first metal layer on the first sacrificial layer;
removing portions of the first metal layer to define a set of first via supports;
depositing a second sacrificial layer on the first metal layer;
removing portions of the second sacrificial layer to define a second set of ~~second~~
~~via forms;~~ vias;
depositing a second metal layer on the second sacrificial layer;
removing portions of the second metal layer to define a set of second via supports;
recoating the micro-mechanical device with a recoat layer of sufficient thickness
to completely encapsulate the micro-mechanical device;
curing the recoat layer; and
removing the recoat layer by immersing the substrate in a cleansing solution
comprising super-critical carbon dioxide and a solvent suitable to remove the recoat layer.

29. (currently amended) A method according to claim 28, wherein the solvent is selected from the group consisting of methanol, ethanol, ethyl acetate, methyl acetate, acetone, methylethylketone, [[or]] and methyl tertiary-butyl ether.

30. (original) A method according to claim 28, wherein the recoat layer comprises a mixture of novolac resin and a photoresist solvent.

31. (original) A method according to claim 30, wherein the recoat layer does not contain a photoactive compound.

32. (original) A method according to claim 28, wherein the step of curing the recoat layer comprises a hard bake.

33. (original) A method according to claim 28, wherein the step of curing the recoat layer comprises a soft bake.

34. (original) A method according to claim 28, wherein the step of curing the recoat layer comprises UV hardening.

35. (currently amended) A method according to claim 28, wherein the step of removing the ~~sacrificial~~ recoat layer further comprises agitating the cleansing solution with an impeller.

36. (original) A method according to claim 28, wherein the cleansing solution further comprises a non-ionic surfactant solution.

37. (original) A method according to claim 36, wherein the non-ionic surfactant solution comprises a polystyrene-b-poly(1,1-dihydroperfluorooctyl acrylate) copolymer.